

DIRECT TESTIMONY AND EXHIBIT OF

DR. JOHN C. RUOFF

ON BEHALF OF

THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF

DOCKET NO. 2019-182-E

IN RE: SOUTH CAROLINA ENERGY FREEDOM ACT (H.3659)

PROCEEDING INITIATED PURSUANT TO S.C. CODE ANN. SECTION 58-

40-20(C): GENERIC DOCKET TO (1) INVESTIGATE AND DETERMINE

THE COSTS AND BENEFITS OF THE CURRENT NET ENERGY

METERING PROGRAM AND (2) ESTABLISH A METHODOLOGY FOR

CALCULATING THE VALUE OF THE ENERGY PRODUCED BY

CUSTOMER-GENERATORS

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.

A. My name is Dr. John C. Ruoff. My business address is 6170 Crabtree Road, Columbia, South Carolina 29206. I am Principal and Owner of The Ruoff Group.

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I earned a Ph.D. in History at the University of Illinois at Urbana-Champaign, awarded in 1976 to go with an M.A. from Illinois (1971) and a B.A. from Seattle University (1969). For over forty years I have engaged in policy analysis and advocacy on energy and utility issues in South Carolina, including participating as a *pro se* intervenor in rate and rulemaking proceedings before this Commission from 1979 through 2002 regarding electricity, gas, telecommunications, and transit. From 1979 to 1987, I was employed by

Fairfield United Action to organize and advocate around a broad set of community issues, including licensing of V.C. Summer Unit 1 and South Carolina Electric & Gas Company rate increases. I represented consumer interests on a broad range of issues before the South Carolina General Assembly from 1987 to 2011 for South Carolina Fair Share with a particular emphasis on low-income consumers. A significant portion of that work related to regulatory policy for electric, gas and telecommunications utilities. I continue to engage in legislative and stakeholder processes on behalf of AARP South Carolina and S.C. Appleseed Legal Justice Center. I have appeared numerous times as an expert in state and federal courts, testifying on household economics, statistical analyses, social and economic matters, demography, Southern history, Southern politics, elections, redistricting and voting rights. My curriculum vita is attached as Exhibit JCR-1.

Q. ON WHOSE BEHALF DO YOU PROVIDE THIS DIRECT TESTIMONY?

A. I am providing this testimony on behalf of the South Carolina Office of Regulatory Staff (“ORS”).

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA (“COMMISSION”)?

A. Yes. Most recently, I provided testimony on the behalf of ORS in the Duke Energy general base rate cases (Docket Nos. 2018-318-E and 2018-319-E) related to the impacts of the requested increase on customers.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS PROCEEDING?

A. ORS requested that my direct testimony address the impact of cost-shift or cross-subsidization of net metering customers by customers who do not have, do not want, and

cannot afford to install solar generation. The South Carolina General Assembly expressed specifically an intent to ensure that successor net metering tariffs “[f]airly allocate costs and benefits to eliminate any cost shift or subsidization associated with net metering to the greatest extent practicable.”¹

Q. PLEASE EXPLAIN THE IMPACT ON NON-SOLAR CUSTOMERS WHEN THE COSTS ARE SHIFTED FROM NET METERING CUSTOMERS TO NON-SOLAR CUSTOMERS.

A. The vast majority of residential electric customers in South Carolina have not chosen to employ net-metered solar installations on their homes. When costs are shifted from solar customers to non-solar customers, the price of electricity goes up for those non-solar customers, many of whom might adopt solar if it were accessible and affordable to them. Especially for low-income customers, that subsidy only adds to the high energy burdens and economic insecurities they already face, potentially bringing down the house of cards that is household economics for low-income South Carolinians.

Q. WHAT ARE THE ECONOMIC CHARACTERISTICS OF THOSE WITH ROOFTOP SOLAR?

A. We lack state-level data on the demographics of rooftop solar adopters in South Carolina. However, national studies make clear that higher income consumers are overrepresented among rooftop solar adopters and lower-income consumers are underrepresented. A 2018 study by Lawrence Berkeley National Laboratory found: “15% have household incomes <\$50k, 33% are between \$50-100k, 24% are between \$100-150k,

¹ S.C. Code Ann. § 58-40-20(A)(3).

1 and the remaining 28% are $\geq \$150k$.² The United States Census Bureau's 2019 American
2 Housing Survey tells a similar tale.³ It is important to note that a \$50,000 household income
3 would have been 234 % of the Federal Poverty Guideline for a family of three and 194 %
4 for a family of four.

5 Several factors influence the low distribution of solar adopters among low and
6 moderate income families. Rooftop solar is largely unavailable in rental housing, the most
7 common form of tenure for lower income residents. Even for a lower income homeowner,
8 rooftop solar is beyond financial reach, especially in areas where there are no supportive
9 programs to spur adoption of rooftop solar by low-income customers.⁴ The gross cost of a
10 4 kW to 8 kW solar installation in South Carolina is about \$12,500 to \$25,000.⁵ Financing
11 those costs at reasonable rates, if at all, is simply unavailable to lower income consumers.

12 The South Carolina Revenue and Fiscal Affairs Office estimates total state tax
13 credits of \$26,274,000 in FY20-21 for South Carolina Code Ann. §12-6-3587 solar tax
14 credits.⁶ However, nonrefundable state⁷ and federal⁸ tax credits, which have a very large
15 impact on the cost and investment recovery time of solar installations, are unavailable to

² G. Barbose et al., *Lawrence Berkeley National Laboratory Income Trends of Residential PV Adopters: An Analysis of Household-Level Income Estimates* (April 2018), 12, <https://eta-publications.lbl.gov/sites/default/files/solar-adopter-income-trends-report.pdf>.

³ U.S. Census Bureau, American Housing Survey, 2019 National - Heating, Air Conditioning, and Appliances - All Occupied Units, Variable 1: Household Income, Variable 2: Tenure, Solar Panels.

⁴ For examples of such programs in other states, see Clean Energy States Alliance, *Solar With Justice: Strategies for Powering Up Under-Resourced Communities and Growing an Inclusive Solar Market* (December 2019), 38, <https://www.cesa.org/wp-content/uploads/Solar-with-Justice.pdf>.

⁵ See EnergySage, *Solar Panel Cost in South Carolina* (September 26, 2020), <https://www.energysage.com/local-data/solar-panel-cost/sc/>.

⁶ Tax Expenditure Report: FY 2018-19 to FY 2020-21 (January 2020), http://rfa.sc.gov/files/TAX%20EXPENDITURE%20REPORT%20FINAL%201-9-2020_0.pdf.

⁷ S.C. Code Ann. §12-6-3587.

⁸ SEIA, *Solar Investment Tax Credit*, <https://www.seia.org/initiatives/solar-investment-tax-credit-itc>.

about half of South Carolinians who do not have an income tax liability to offset.⁹ The substantial tax subsidies for rooftop solar are skewed towards higher income homeowners, making them the most likely to install rooftop solar and also to benefit from net metering subsidies.

Q. HOW AFFORDABLE ARE ENERGY COSTS TO LOW-INCOME SOUTH CAROLINIANS?

A. “Home energy is a crippling financial burden for low-income South Carolina households. South Carolina households with incomes of below 50% of the Federal Poverty Level¹⁰ pay 37% of their annual income simply for their home energy bills,” according to economic consultants Fisher, Sheehan & Colton.¹¹ The federal Department of Energy’s LEAD Tool shows that the average “energy burden” in South Carolina is 3 % of income,¹² but those living at or below the federal poverty level spend an average of 21 % of their income on energy.¹³

My analysis of the Energy Information Administration’s 2015 Residential Energy Consumption Survey (“RECS”) shows that nearly one in five lower-income (below \$20,000) households in South Carolina had received a “a disconnection notice, shut off notice, or nondelivery notice for an energy bill notice in the previous year.” Thirteen

⁹ Erica York, *Tax Foundation, Summary of the Latest Federal Income Tax Data, 2020 Update* (February 25, 2020), <https://taxfoundation.org/summary-of-the-latest-federal-income-tax-data-2020-update/>. Because of tax conformity, the South Carolina individual income tax system generally mirrors federal tax incidence.

¹⁰ Federal Poverty Level varies by family size. The 2019 Table can be found at U.S. Dept. of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation, 2019 Poverty Guidelines, <https://aspe.hhs.gov/2019-poverty-guidelines>.

¹¹ Fisher, Sheehan & Colton, *The Home Energy Affordability Gap 2019*, 2nd Series (April 2020), 1, http://www.homeenergyaffordabilitygap.com/downloads/2019_Released_Apr20/ZIP_Archives/2019_South%20Carolina%20Rev2.zip.

¹² Energy burden is defined by the U.S. Department of Energy as the percentage of gross household income spent on energy costs.

¹³ U.S. Dept. of Energy, Office of Energy Efficiency & Renewable Energy, Low-Income Energy Affordability Data (LEAD) Tool, Avg. Energy Burden (% Income), <https://www.energy.gov/eere/slsc/maps/lead-tool>.

1 percent of lower-income customers kept their homes at unhealthy temperatures at some
2 point in the previous year. Nearly one third of lower-income customers had reduced or
3 foregone basic necessities during at least one month in the previous year in order to free up
4 sufficient funds to pay their energy bills.¹⁴

5 Funds to assist those with high energy burdens in South Carolina are very limited.
6 Unlike many other states, we lack a Lifeline-like program of bill credits, low-income
7 tariffs, or percentage of income plans for low-income consumers. The latest federal Low-
8 Income Home Energy Assistance Program (“LIHEAP”) FY2019 State Profile shows that
9 South Carolina had a net total available of \$49 million in FY2019 which assisted merely
10 10% of the income-eligible population of 454,826 in that year. Three-quarters of those
11 households had a vulnerable member, meaning an elderly person over age 60, a disabled
12 person or a child under age 6.¹⁵ FY 2020 funding for LIHEAP, including \$18 million from
13 the CARES Act Public Law 116-136, is \$67 million.¹⁶

14 Jurisdictional utilities, except perhaps Lockhart Power Company, offer a variety of
15 customer assistance programs. However, these programs are not intended to make electric
16 and gas service affordable to all low-income consumers. They address the needs of people
17 who have been disconnected or are about to be disconnected for non-payment

18 **Q. IS ENERGY BURDEN THE ONLY KIND OF ECONOMIC INSECURITY SOUTH**
19 **CAROLINA’S LOW-INCOME POPULATION SUFFERS?**

¹⁴ Energy Information Administration, 2015 Residential Energy Consumption Survey (RECS),
Household Questionnaire – Computer-Assisted Personal Interview (CAPI),
https://www.eia.gov/survey/form/eia_457/2015_EIA-475A_CAPI.pdf.

¹⁵ USDHHS, Administration for Children & Families, LIHEAP Performance Management, Data Warehouse,
Grantee Profiles, https://liheappm.acf.hhs.gov/data_warehouse/index.php?report=homepage. Data for FY2019 is
preliminary.

¹⁶ USDHHS, Administration for Children & Families,
South Carolina Low-Income Energy Programs, <https://liheapch.acf.hhs.gov/profiles/SC.htm>.

A. No. South Carolina is a state with high levels of poverty and economic insecurity. In 2019, 10% (126,000) of South Carolina families lived below the poverty level. One in five (21%) Black families and nearly as large a proportion (18%) of Latino families lived in poverty in 2019.¹⁷

Those living in poverty are five times as likely to rent rather than own their homes.¹⁸ The general rule of thumb for rental housing affordability, is that no more than 30% of gross income should go to rent and utilities. But, in South Carolina in 2019, 42% of renting households paid more than an affordable share of their income to rent alone, including 21% who paid more than half their income in rent.¹⁹ The median household rent was \$922 per month, slightly more than \$11,000 per year.²⁰ Only one in five low-income renters is in subsidized housing.²¹

“South Carolina has, by far, the highest rate of evictions in the United States. This leads to severe housing instability for impoverished tenants,” the South Carolina Housing Authority tells us.²² A 2016 study by Princeton’s Eviction Lab found an eviction rate of 9% in South Carolina—one in eleven renter households evicted in a year.²³ Among Large

¹⁷ U.S. Census Bureau, 2019 American Community Survey (“ACS”) 1-Year Estimates, Table S1702, Poverty Status in the Past 12 Months of Families, <https://data.census.gov/cedsci/table?q=ACSST1Y2019.S1702&g=0400000US45&tid=ACSST1Y2019.S1702&moe=false&hidePreview=false>.

¹⁸ *Ibid.*

¹⁹ ACS 2019 1-year estimate, Table B25070, Gross Rent as a Percentage of Household Income in the Past 12 Months, <https://data.census.gov/cedsci/table?q=RENT%20as%20Percent%20of%20Income&g=0400000US45&tid=ACSDT1Y2019.B25070&hidePreview=true>.

²⁰ ACS 2019 1-year estimate, Table DP04, Selected Housing Characteristics, <https://data.census.gov/cedsci/table?q=rent&g=0400000US45&tid=ACSDP1Y2019.DP04&moe=false&hidePreview=true>.

²¹ South Carolina State Housing Finance and Development Authority, South Carolina Housing Needs Assessment (August 2019), 5, https://issuu.com/schousing/docs/sc_needs_assessment_report_finalweb?fr=sY2QzYzE3MTk1MQ.

²² *Ibid.*, 4.

²³ Eviction Lab, <https://evictionlab.org/map/#/2016?geography=states&bounds=-184.189,15.336,-70.346,55.796&type=er&locations=45,-80.899,33.919>.

1 Cities, North Charleston led the nation with an eviction rate of 16.5 %. Among mid-size
2 cities, South Carolina had eight of the top one-hundred eviction rates and among the one-
3 hundred highest eviction rates in small cities and rural areas, South Carolina had 44
4 communities.²⁴ In addition to inability to pay rent, utility disconnection often can lead to
5 eviction.

6 In January 2020, before the Covid-19 pandemic, 266,299 households with 571,309
7 persons received Supplemental Nutrition Assistance Program (“SNAP”)²⁵ assistance. The
8 average benefit was \$118.22 per month or \$3.81 per day.²⁶ By August 2020 that assistance
9 was received by 293,921 households with 617,334 persons with an average benefit of
10 \$174.73. With a diet based upon the U.S. Department of Agriculture’s Thrifty Food Plan,
11 the Food Research and Action Center notes: “SNAP recipients cannot afford the plan and
12 an adequate diet with their allotment. This is true despite the fact that SNAP participants
13 use a variety of savvy shopping practices to stretch their limited food dollars.”²⁷ For a
14 family of four with children aged 6-8 and 9-11 years, the difference between the
15 nutritionally inadequate Thrifty Plan and a Moderate Plan is \$434 per month.²⁸ Even
16 receiving SNAP leaves lower income South Carolinians food insecure.

17 The pandemic has hit low- and moderate-income South Carolinians particularly
18 hard, increasing economic insecurity. Although the unemployment rate has improved to a

²⁴ Eviction Lab, Eviction Rankings,
<https://evictionlab.org/rankings/#/evictions?r=United%20States&a=2&d=evictionRate>.

²⁵ Formerly called Food Stamps.

²⁶ SC Dept. of Social Services, SNAP Participation: January 2020, https://dss.sc.gov/media/2259/fs_202001.pdf and
August 2020, https://dss.sc.gov/media/2259/fs_202008.pdf.

²⁷ Food Research and Action Center, Replacing the Thrifty Food Plan in Order to Provide Adequate Allotments for
SNAP Beneficiaries (December 2012), 2, https://frac.org/wp-content/uploads/thrifty_food_plan_2012.pdf.

²⁸ U.S. Dept. of Agriculture, Official USDA Food Plans: Cost of Food at Home at Four Levels, U.S. Average,
August 2020, <https://www.fns.usda.gov/sites/default/files/media/file/CostofFoodAug2020.pdf>.

1 still high 6.3%,²⁹ sectors with high concentration of low-paid workers still show
2 significant year-to-year reductions in employment. The Leisure and Hospitality sector
3 employed 55,800 fewer persons in August 2020 than in August 2019. Education and
4 Health Services employed 15,600 fewer over the same period.³⁰

5 The United States Census Bureau's August 19-31, 2020 Pulse Survey found that
6 one in five South Carolina adults expect someone in their household to have a loss in
7 employment in the next four weeks. One in ten South Carolina adults either sometimes or
8 often did not have enough to eat in the previous week. One in three adults lives in a
9 household where it has been somewhat or very difficult to pay for usual household
10 expenses, including power bills, during the Covid-19 pandemic. Forty percent of South
11 Carolina adults live in households where eviction or foreclosure in the next two months is
12 either likely or very likely.³¹

13 An analysis by the consultancy Stout Risius Ross, LLC, finds that 52 % of renter
14 households in South Carolina, a total of 273,000 households, are unable to pay rent and
15 are at risk for eviction. The rental shortfall is \$275 million. Stout estimates that 185,000
16 households in our state face eviction in the coming four months.³² Feeding America found
17 that 17 % (875,230) of South Carolinians are food insecure in 2020, a 46 % increase from

²⁹ SC Dept. of Employment and Workforce (SCDEW), Employment and Workforce Executive Director Dan Ellzey's Statement: August 2020 Employment Situation (September 18, 2020), https://dew.sc.gov/docs/default-source/press-releases/ellzey-statement-august-2020.pdf?sfvrsn=cfec06_0.

³⁰ SCDEW, South Carolina's Employment Situation: August 2020 (September 18, 2020), https://dew.sc.gov/docs/default-source/press-releases/august-2020-press-release-final.pdf?sfvrsn=465a8b09_0.

³¹ U.S. Census Bureau, Household Pulse Survey Phase 2: Measuring Social and Economic Impacts during the Coronavirus Pandemic, Household Pulse Survey Interactive Tool, Week 13, <https://www.census.gov/data-tools/demo/hhp/#/?measures=FIR>.

³² Stout, Estimation of Households Experiencing Rental Shortfall and Potential Eviction (July 29, 2020), <https://app.powerbi.com/view?r=eyJrIjoibG9ja2NzAtMGE1MC00NmNjLTllOTMtYjM2NjFmOTA4ZjMyIiwidCI6Ijc5MGJmNjk2LTE3NDYtNGE4OS1hZjI0LTc4ZGE5Y2RhZGE2MSIsImMiOiN9.>

2018. One in four (26%) of South Carolina children in 2020 is food insecure, a 59% increase from 2018.³³

Based on these statistics, it is clear that life for low-income South Carolinians entails a constant juggling act trying to keep a set of financial balls in the air. Even what might seem like small amounts to economically secure persons can cause those balls to come crashing down for a low-income family. Meanwhile, low-income consumers make the following difficult choices to accommodate any change in expenses:

- Reduce energy use, often meaning a life that is colder (or hotter) and darker. Sixteen percent of the lowest income consumers do not have air-conditioning.³⁴ We are all familiar with annual calls for fans for poor persons, especially elderly poor.
- Cut back on needed health care expenditures for both care and medicine.
- Reduce already limited food intake or convert from healthy eating to calorie eating.
- Delay purchase or maintenance of a car, threatening their ability to get to work. Eighty thousand South Carolina renter households already lack access to a vehicle.³⁵
- Lose a home to bankruptcy or eviction.

³³ Gundersen, C., M. Hake, A. Dewey, & E. Engelhard (2020), The Impact of the Coronavirus on Food Insecurity v1 [Data file and FAQ]. Available from Feeding America: research@feedingamerica.org.

³⁴ U.S. Energy Information, Administration, Residential Energy Consumption Survey (RECS) 2015 Survey Data (December 2018), <https://www.eia.gov/consumption/residential/data/2015/index.php?view=microdata>.

³⁵ ACS, 2019 1-year estimate, Table C25045, Tenure by Vehicles, <https://data.census.gov/cedsci/table?q=vehicles&g=0400000US45&tid=ACSDT1Y2019.C25045&moe=false&hidePreview=true>.

- Borrow money at unconscionable rates from payday lenders (391% APR), title lenders (150% - 300% APR) or pawn brokers (141% -270 % APR for a loan of \$100 to \$1,000).³⁶

Q. PLEASE IDENTIFY SOME WAYS ACCESS TO SOLAR MAY BENEFIT LOW-INCOME COMMUNITIES.

A. There are a number of models of solar development that may benefit low-moderate income communities across the country. However as one study of such programs notes: “It’s still the experimental phase for low-income solar.”³⁷ The models generally entail public or private entities contributing financial assistance to programs. Other than a portion of relatively small shared solar developments by investor-owned utilities, I am unaware of any significant efforts designed to provide solar to low and moderate income communities in South Carolina. In addition, the costs for the current community and shared solar efforts by the investor-owned utilities are socialized to all customers, including low-income customers, under Act 236.

The Clean Energy States Alliance observes: “An important strategy for using solar development to build wealth in under-resourced communities is to emphasize training and workforce development so that jobs are created in those communities.”³⁸ To date, solar is a relatively small employer in our state, employing only 3,307 people in 2019 with no expected growth in 2020 according to The Solar Foundation.³⁹ The solar industry should

³⁶ See S.C. Appleseed Legal Justice Center, Easy In, Impossible Out: How High-Cost Lending Devastates South Carolina Communities (July 2020), <https://www.scjustice.org/wp-content/uploads/2020/07/Easy-in-Impossible-Out-Payday-Lending-Report.pdf>.

³⁷ Solar with Justice, 38.

³⁸ *Ibid.*, 44.

³⁹ Solar Jobs Census 2019: South Carolina, <https://www.thesolarfoundation.org/solar-jobs-census/factsheet-2019-sc/>.

commit to workforce development initiatives to develop employment and solar accessibility opportunities specifically for low-income communities.

Q. WHAT DO YOU RECOMMEND TO THE COMMISSION?

A. Rooftop solar presents many challenges and opportunities, but it has the potential to widen the energy equity gap in South Carolina if non-solar customers continue to subsidize solar customers. In this evaluation and the subsequent solar choice metering tariff discussion, the Commission should take steps to ensure that low and moderate income customers, who do not have access to solar and who cannot afford solar, should not pay more for the energy in order to subsidize or incentivize rooftop solar. In addition, the Commission should challenge the solar industry to present creative ways to make solar adoption more attractive and accessible for low-income utility customers while maintaining a fair allocation of the costs and benefits to minimize any cost shift.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

JOHN C. RUOFF
 6170 Crabtree Road
 Columbia, South Carolina 29206
 803-782-5401

EDUCATION

Ph.D. (History), University of Illinois at Urbana-Champaign, 1976

Research specialty: social and cultural history of the 19th Century American South with special emphasis on women, the family, demography and the religious basis of behavior. Dissertation: "Southern Womanhood, 1865 - 1920: An Intellectual and Cultural Study."

A.M. (History), University of Illinois at Urbana-Champaign, 1971

B.A. (History), Seattle (WA) University, 1969

EMPLOYMENT

The Ruoff Group

Principal

2011 – present:

Provide expert statistical and demographic analyses, mapping, policy research and analyses. Published South Carolina legislative monitoring and tracking service, 2011-2018.

South Carolina Fair Share

Executive Director

1987-1995

Research Director

1995-2009

Interim Executive Director

2000-2001; 2008-2009

Program Director

2009-2011

Responsibilities included research and policy analysis and testimony to committees of the South Carolina General Assembly on: income and poverty, consumer finance (small loans, payday loans and title loans), mortgage lending, welfare reform, food stamps, health care access and affordability, auto insurance, health insurance, public utilities, tax policy, budget policy and consumer protection.

Independent Consultant

1995-2011

Provide expert statistical and demographic analyses especially with respect to elections and voting systems. Provide policy analysis with respect to state budgets and taxes and health care.

Fairfield United Action

Staff Member of Community Organization

1980-1982

Staff Director

1982-1986

Responsible for research on issues affecting community.

Independent Consultant

1979 - 1986

Consultations with a variety of non-profit organizations with financial management, long-range planning and priority setting, evaluation, board development, grant writing and fundraising, and organizational development, as well as statistics and demography and community history.

Palmetto Legal Services, Columbia, SC

Management Consultant with additional responsibility for statistical research in support of litigation.

1979

South Carolina Legal Services Coalition

Training Coordinator

1978-1979

Responsible for training needs assessment, training design and implementation.

Illinois Conference, American Association of University Professors, Urbana, IL.

Executive Secretary

1975-1978

CONSULTANCIES AND EXPERT TESTIMONY

Assisted community groups, council members, school boards, county councils, legislators and special redistricting committees to prepare and evaluate districting proposals in South Carolina for: South Carolina House of Representatives, South Carolina Senate, United States Congress, Abbeville County Board of Education, Aiken City Council, Aiken County Council, Aiken County School Board, Bamberg School Dist. 1, Barnwell County Council, Calhoun County Council, Camden City Council, Charleston City Council, Charleston County Council, Cheraw Town Council, Cherokee County Council, Cherokee County School District 1, Chester County Council, Chesterfield County Council, Clarendon County Council, Clinton City Council, Clover School District, Colleton County Council, Colleton County School Board, Columbia City Council, Cowpens Town Council, Darlington County Council, Dorchester County Council, Dorchester School District 2, Dorchester School District 4, Eutawville Town Council, Fairfield County School Board, Fairfield County Council, Fountain Inn Town Council, Florence County Council, Florence County School District 1, Ft. Mill Town Council, Gaffney Board of Public Works, Gaffney City Council, Georgetown City Council, Greenville City Council, Greenville County Council, Greenwood City Council, Greenwood County Council, Greenwood County School Districts 50 and 52, Greer Town Council, Hartsville City Council, Hilton Head Island Town Council, Horry County Council, Jasper County Council, Jasper County School Board, Kershaw County School Board, Kershaw County Council, Lancaster City Council, Lancaster County Council, Lancaster County School Board, Laurens County Council, Laurens School Districts 55 and 56, Laurens Commissioners of Public Works, Laurens Town Council, Lee County Council, Marion County Council, Marion Town Council, Marlboro County Council, McCormick County Council, Mullins Town Council, North Charleston City Council, Norway Town Council, Oconee County Council, Orangeburg County Council, Orangeburg City Council, Richland County Council, Richland County School District 1, Ridgeville Town Council, Rock Hill City Council, Saluda County Council, Saluda County School Board, Saluda City Council, Summerton Town Council, Sumter County Council, Sumter City Council, Sumter School District, Sumter School Dist. 17, Sumter School Dist. 2 and Union County School Dist. 1991 - 2015.

Thomas et al. v. Andino et al., United States District Court for the District of South Carolina, CA 20-01552, 2020. Expert Report on history of voting discrimination in South Carolina, racial polarization and racial bloc voting. Expert report.

In Re: Application of Duke Energy Progress For Adjustments in Electric Rate Schedules and Tariffs And Request For an Accounting Order, S.C. Public Service Commission, Docket No. 2018-318-E, 2019. Testimony on behalf of Office of Regulatory Staff regarding the impact to the customer if Duke Energy Progress proposals were to be adopted.

In Re: Application of Duke Energy Carolinas For Adjustments in Electric Rate Schedules and Tariffs And Request For an Accounting Order, S.C. Public Service Commission, Docket No. 2018-319-E, 2019. Testimony on behalf of Office of Regulatory Staff regarding the impact to the customer if Duke Energy Carolinas proposals were to be adopted.

In Re: Application of Duke Energy Carolinas For Adjustments in Electric Rate Schedules and Tariffs And Request For an Accounting Order, S.C. Public Service Commission, Docket No. 2018-319-E, 2019. Allowable *Ex Parte* Briefing Regarding Effects of Proposed Rate Adjustment on Consumers on behalf of AARP South Carolina.

Waller et al. v. State of South Carolina, 8th Judicial Circuit of South Carolina, 2015-CP-24-00514, 2015-2016. Expert affidavit regarding legislative history of Heritage Act and history of Confederate monuments in South Carolina.

Okadigwe v. SC Dept. of Labor, Licensing and Regulation, Pharmacy Board, SC Administrative Law Court, 16-ALJ-11-0230-AP, 2016. Analyze pharmacist discipline orders 2009-2016. Expert report.

Richland County School District 1, 2015-2016. Advised School Commissioners on redistricting of single-member districts. Prepared districting alternative plan adopted by the S.C. General Assembly.

Fraser et al. v Jasper County School Dist. et al., United States District Court for the District of South Carolina, CA14-2578, 2014-2015. Expert consultant. Assisted counsel for Defendant-Intervenor by analyzing and preparing proposed districting plans.

City of Walterboro et al. v. Pinckney et al., United States District Court for the District of South Carolina, CA14-3231, 2014. Expert consultant. Advised counsel for defendant on redistricting practices.

Veasey et al. v. Abbot et al., United States District Court for the Southern District of Texas, CA13-193, 2013-2014. Expert consultant. Assisted counsel for Veasey Plaintiffs by providing demographic and voting analyses and advising on database matching.

Robinson et al. v. SC Dept. of Employment and Workforce, 2nd Judicial Circuit of South Carolina, 2013-CP-06-059, 2013-2016. Economic impact on families of missing unemployment insurance (UI) payments. Expert report and testimony.

South Carolina v. United States, United States District Court for the District of Columbia. CA12-203, 2012. Expert consultant. Assisted counsel for Defendant-Intervenors with database preparation, preparation of exhibit maps reflecting public transit systems in South Carolina, guidance on legislative procedure and other research tasks.

Fairfield County School District v. Chester County School District, et al., 5th Judicial Circuit of South Carolina, 2010-CP-40-4017, 2011-12. Expert consultant. Assist counsel by mapping Fairfield students attending Chester schools and analyzing tax and budget issues related to the litigation.

Report on racially disparate effects of 2011 S.C. Act 27 (Photo Voter Identification) for use in submissions to Voting Rights Section, Department of Justice, regarding preclearance consideration, 2011-12.

South Carolina House of Representatives Democratic Caucus, 2011. Assist counsel in preparation and evaluation of House and Congressional redistricting plans.

South Carolina Senate Democratic Caucus, 2011. Assist counsel in preparation and evaluation of Senate and Congressional redistricting plans.

Board of Trustees of School District of Fairfield County v. State of South Carolina et al. Op. No. 27035 South Carolina Supreme Court (29 August 2011) 2010. Analysis of votes on veto overrides of local legislation, 1903-1910, relied upon by S.C. Supreme Court in its decision.

Analyses of elections and electoral participation for use in submissions to Voting Rights Section, Department of Justice, regarding preclearance consideration of 2010 S.C. Acts 308 and 309, on behalf of Fairfield County (South Carolina) Board of School Trustees, 2010.

Levy et al. v. Lexington County, South Carolina, School District Three et al. United States District Court for the District of South Carolina, 2004 - 2012. Racial polarization in voting, electoral mobilization, proposed districting maps and socio-economic disparities in income, education, employment, housing, communications and transportation. Expert reports and testimony.

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Proceeding to Address Public Interest Pay Telephones in S.C., South Carolina Public Service Commission, Docket No. 2003-358-C, 2004 - 2005. Need for public pay phones in South Carolina. Telephone availability and spatial relationship of pay phones and low-income persons. Expert testimony.

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South Carolina Conference of Branches, NAACP. Retained to assist branches with evaluating and proposing districting plan for local jurisdictions. 2001 – 2005, 2011 – 2013.

South Carolina Legislative Black Caucus. Provide technical assistance with respect to reapportionment especially regarding the South Carolina House of Representatives. 2001.

***Moultrie v. Charleston County Council* and *United States v. Charleston County*,** United States District Court for the District of South Carolina, 2000-2003. Racial polarization in voting, electoral mobilization and proposed districting maps. Expert report and testimony.

***Edisto Surgery Center v. S.C. Dept. of Health and Environmental Control and The Regional Medical Center of Orangeburg and Calhoun Counties*,** South Carolina Administrative Law Judge Division, 1998. Analysis and evaluation of surgery utilization data and evaluation of public opinion poll. Expert report and testimony.

***Smith, et al. v. Beasley, et al.* and *Able, et al. v. Wilkins, et al.*,** United States District Court for the District of South Carolina, 1995 - 1996. Racial polarization in voting, differential voter participation, and socio-economic disparities in income, education, employment, housing, communications and transportation in challenged South Carolina House of Representatives and Senate districts. Expert report and testimony.

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***Franklin, et al. v. Campbell, et al.* and *NAACP, et al. v. Town of Hemingway, et al.*,** United States District Court for the District of South Carolina, 1994. Prepare demographic and voting analyses with respect to attempted secession from one county and annexation to another on behalf of Williamsburg County School Board. Expert affidavit.

Richland County (South Carolina) Council, 1994, 1996-1997. Prepare demographic and voting analyses regarding preclearance filing with Justice Department under Voting Rights Act for County Council districts.

***NAACP, et al. v. Spartanburg County Board of Education, et al.*,** United States District Court for the District of South Carolina, 1992 - 1993. Analyze proposed districting proposals and prepare alternative proposals for Spartanburg County Board of Education, Spartanburg School District 5 and Spartanburg School District 7.

***NAACP, et al. v. Holly Hill Town Council, et al.*,** United States District Court for the District of South Carolina, 1992. Analyze proposed districting proposals and prepare alternative proposal. Expert testimony.

***NAACP, et al. v. Kershaw County, South Carolina, et al.*,** United States District Court for the District of South Carolina, 1990 - 1993. Racial polarization in voting, differential voter registration and turnout, and disparities in income, housing, employment, education, communications and transportation. Prepare proposed redistricting maps and evaluate proposed plans. Expert reports and testimony.

***Prescott, et al. v. Riley, et al.*,** United States District Court for the District of South Carolina, 1992. Prepare proposed redistricting map for City of Charleston and evaluate city proposal.

NAACP, et al. v. Rowan-Salisbury Board of Education and Rowan County Board of Elections, United States District Court for the Middle District of North Carolina, 1992. Racial polarization in voting, differential voter registration and turnout, and lingering effects. Expert report.

NAACP, et al. v. City of Reidsville, et al., United States District Court for the Middle District of North Carolina, 1992. Racial polarization in voting, differential voter registration and turnout, and lingering effects. Expert report.

Burton, et al. v. Sheheen, et al. and Statewide Reapportionment Advisory Committee, et al. v. Campbell, et al., United States District Court for the District of South Carolina, 1991 - 1995. Prepare proposed district maps for U.S. Congress and South Carolina General Assembly. Monitor legislative process. Expert testimony.

NAACP, et al. v. Manning (SC) City Council, United States District Court for the District of South Carolina, 1991. Prepare proposed district maps.

NAACP, et al. v. City of Columbia, et al., United States District Court for the District of South Carolina, 1991 - 1993. Socio-economic disparities in income, education, employment, housing, communications and transportation. Prepare proposed district maps. Expert report and testimony.

Charleston County Branch NAACP, et al. v. Charleston (SC) County Council, United States District Court for the District of South Carolina, 1991. Racial polarization in voting, differential voter registration and turnout, and lingering effects. Expert report.

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Walker, et al. v. Fairfield County Council, et al., United States District Court for District of South Carolina, 1989 - 1990. Prepare proposed single-member district lines for plaintiffs.

NAACP, et al. v. City of Lancaster, et al., United States District Court for District of South Carolina, 1989. Racial polarization in voting, differential voter registration and turnout, and lingering effects. Expert report.

NAACP, et al. v. City of Kingstree, et al., United States District Court for District of South Carolina, 1989 - 1991. Racial polarization in voting, differential voter registration and turnout, and lingering effects. Prepare proposed district maps. Expert report.

NAACP, et al. v. City of Gaffney, et al., United States District Court for District of South Carolina, 1989. Racial polarization in voting, differential voter registration and turnout, and lingering effects. Expert report.

NAACP, et al. v. City of Union, et al., United States District Court for District of South Carolina, 1989. Racial polarization in voting, differential voter registration and turnout, and lingering effects. Expert report.

NAACP, et al. v. Town of Saluda, et al., United States District Court for District of South Carolina, 1989. Racial polarization in voting, differential voter registration and turnout, and lingering effects. Expert report.

NAACP, et al. v. South Carolina Democratic Party Executive Committee, et al., United States District Court for District of South Carolina, 1988. Racially differential effects of primary timing on turnout, racial polarization in voting, and socio-economy of South Carolina Senate District 32. Expert report and testimony.

NAACP, et al. v. Richland County Council, et al., United States District Court for District of South Carolina, 1988. Racial polarization in voting. Expert report and testimony.

Blackwater Associates, Columbia, South Carolina, 1988. Analysis of electoral polling data.

Fairfield United Action, 1986, 1989, 1991 and 1993 conducted statewide analyses of bank mortgage lending patterns in support of challenges to bank expansion under Community Reinvestment Act. Evaluated bank community needs assessments, including public opinion polling.

Smalls, et al. v. Fairfield County Council, et al., United States District Court for District of South Carolina, 1986. Political history, voting and turnout patterns, and socio-economy of Fairfield County, South Carolina. Expert report and testimony.

Fairfield County, South Carolina, 1986, directed, evaluated and certified results to Farmers Home Administration of door to door income survey on behalf of Mid County Water Company and Fairfield County Council.

U.S. v. Hamilton, United States District Court for the District of South Carolina, 1985. Statistical representativeness of jury venire. Expert testimony.

Waller v. Butkovich, United States District Court for the Middle District of North Carolina, 1984. Statistical representativeness of jury venire. Expert report.

State v. Vanderhall, 6th Judicial Circuit of South Carolina, 1983. Statistical representativeness of Grand Juries. Expert testimony.

State v. Fields, 14th Judicial Circuit of South Carolina, 1979. Statistical representativeness of Grand Juries. Expert testimony.

JOHN C. RUOFF
6170 Crabtree Road
Columbia, South Carolina 29206
803-782-5401

EDUCATION

Ph.D. (History), University of Illinois at Urbana-Champaign, 1976

Research specialty: social and cultural history of the 19th Century American South with special emphasis on women, the family, demography and the religious basis of behavior. Dissertation: "Southern Womanhood, 1865 - 1920: An Intellectual and Cultural Study."

A.M. (History), University of Illinois at Urbana-Champaign, 1971

B.A. (History), Seattle (WA) University, 1969

EMPLOYMENT

The Ruoff Group	
Principal	2011 – present:
Provide expert statistical and demographic analyses, mapping, policy research and analyses. Published South Carolina legislative monitoring and tracking service, 2011-2018.	
South Carolina Fair Share	
Executive Director	1987-1995
Research Director	1995-2009
Interim Executive Director	2000-2001; 2008-2009
Program Director	2009-2011
Responsibilities included research and policy analysis and testimony to committees of the South Carolina General Assembly on: income and poverty, consumer finance (small loans, payday loans and title loans), mortgage lending, welfare reform, food stamps, health care access and affordability, auto insurance, health insurance, public utilities, tax policy, budget policy and consumer protection.	
Independent Consultant	1995-2011
Provide expert statistical and demographic analyses especially with respect to elections and voting systems. Provide policy analysis with respect to state budgets and taxes and health care.	
Fairfield United Action	
Staff Member of Community Organization	1980-1982
Staff Director	1982-1986
Responsible for research on issues affecting community.	

Independent Consultant

1979 - 1986

Consultations with a variety of non-profit organizations with financial management, long-range planning and priority setting, evaluation, board development, grant writing and fundraising, and organizational development, as well as statistics and demography and community history.

Palmetto Legal Services, Columbia, SC

Management Consultant with additional responsibility for statistical research in support of litigation.

1979

South Carolina Legal Services Coalition

Training Coordinator

1978-1979

Responsible for training needs assessment, training design and implementation.

Illinois Conference, American Association of University Professors, Urbana, IL.

Executive Secretary

1975-1978

CONSULTANCIES AND EXPERT TESTIMONY

Assisted community groups, council members, school boards, county councils, legislators and special redistricting committees to prepare and evaluate districting proposals in South Carolina for: South Carolina House of Representatives, South Carolina Senate, United States Congress, Abbeville County Board of Education, Aiken City Council, Aiken County Council, Aiken County School Board, Bamberg School Dist. 1, Barnwell County Council, Calhoun County Council, Camden City Council, Charleston City Council, Charleston County Council, Cheraw Town Council, Cherokee County Council, Cherokee County School District 1, Chester County Council, Chesterfield County Council, Clarendon County Council, Clinton City Council, Clover School District, Colleton County Council, Colleton County School Board, Columbia City Council, Cowpens Town Council, Darlington County Council, Dorchester County Council, Dorchester School District 2, Dorchester School District 4, Eutawville Town Council, Fairfield County School Board, Fairfield County Council, Fountain Inn Town Council, Florence County Council, Florence County School District 1, Ft. Mill Town Council, Gaffney Board of Public Works, Gaffney City Council, Georgetown City Council, Greenville City Council, Greenville County Council, Greenwood City Council, Greenwood County Council, Greenwood County School Districts 50 and 52, Greer Town Council, Hartsville City Council, Hilton Head Island Town Council, Horry County Council, Jasper County Council, Jasper County School Board, Kershaw County School Board, Kershaw County Council, Lancaster City Council, Lancaster County Council, Lancaster County School Board, Laurens County Council, Laurens School Districts 55 and 56, Laurens Commissioners of Public Works, Laurens Town Council, Lee County Council, Marion County Council, Marion Town Council, Marlboro County Council, McCormick County Council, Mullins Town Council, North Charleston City Council, Norway Town Council, Oconee County Council, Orangeburg County Council, Orangeburg City Council, Richland County Council, Richland County School District 1, Ridgeville Town Council, Rock Hill City Council, Saluda County Council, Saluda County School Board, Saluda City Council, Summerton Town Council, Sumter County Council, Sumter City Council, Sumter School District, Sumter School Dist. 17, Sumter School Dist. 2 and Union County School Dist. 1991 - 2015.

Thomas et al. v. Andino et al., United States District Court for the District of South Carolina, CA 20-01552, 2020. Expert Report on history of voting discrimination in South Carolina, racial polarization and racial bloc voting. Expert report.

In Re: Application of Duke Energy Progress For Adjustments in Electric Rate Schedules and Tariffs And Request For an Accounting Order, S.C. Public Service Commission, Docket No. 2018-318-E, 2019. Testimony on behalf of Office of Regulatory Staff regarding the impact to the customer if Duke Energy Progress proposals were to be adopted.

In Re: Application of Duke Energy Carolinas For Adjustments in Electric Rate Schedules and Tariffs And Request For an Accounting Order, S.C. Public Service Commission, Docket No. 2018-319-E, 2019. Testimony on behalf of Office of Regulatory Staff regarding the impact to the customer if Duke Energy Carolinas proposals were to be adopted.

In Re: Application of Duke Energy Carolinas For Adjustments in Electric Rate Schedules and Tariffs And Request For an Accounting Order, S.C. Public Service Commission, Docket No. 2018-319-E, 2019. Allowable *Ex Parte* Briefing Regarding Effects of Proposed Rate Adjustment on Consumers on behalf of AARP South Carolina.

Waller et al. v. State of South Carolina, 8th Judicial Circuit of South Carolina, 2015-CP-24-00514, 2015-2016. Expert affidavit regarding legislative history of Heritage Act and history of Confederate monuments in South Carolina.

Okadigwe v. SC Dept. of Labor, Licensing and Regulation, Pharmacy Board, SC Administrative Law Court, 16-ALJ-11-0230-AP, 2016. Analyze pharmacist discipline orders 2009-2016. Expert report.

Richland County School District 1, 2015-2016. Advised School Commissioners on redistricting of single-member districts. Prepared districting alternative plan adopted by the S.C. General Assembly.

Fraser et al. v Jasper County School Dist. et al., United States District Court for the District of South Carolina, CA14-2578, 2014-2015. Expert consultant. Assisted counsel for Defendant-Intervenor by analyzing and preparing proposed districting plans.

City of Walterboro et al. v. Pinckney et al., United States District Court for the District of South Carolina, CA14-3231, 2014. Expert consultant. Advised counsel for defendant on redistricting practices.

Veasey et al. v. Abbot et al., United States District Court for the Southern District of Texas, CA13-193, 2013-2014. Expert consultant. Assisted counsel for Veasey Plaintiffs by providing demographic and voting analyses and advising on database matching.

Robinson et al. v. SC Dept. of Employment and Workforce, 2nd Judicial Circuit of South Carolina, 2013-CP-06-059, 2013-2016. Economic impact on families of missing unemployment insurance (UI) payments. Expert report and testimony.

South Carolina v. United States, United States District Court for the District of Columbia. CA12-203, 2012. Expert consultant. Assisted counsel for Defendant-Intervenors with database preparation, preparation of exhibit maps reflecting public transit systems in South Carolina, guidance on legislative procedure and other research tasks.

Fairfield County School District v. Chester County School District, et al., 5th Judicial Circuit of South Carolina, 2010-CP-40-4017, 2011-12. Expert consultant. Assist counsel by mapping Fairfield students attending Chester schools and analyzing tax and budget issues related to the litigation.

Report on racially disparate effects of 2011 S.C. Act 27 (Photo Voter Identification) for use in submissions to Voting Rights Section, Department of Justice, regarding preclearance consideration, 2011-12.

South Carolina House of Representatives Democratic Caucus, 2011. Assist counsel in preparation and evaluation of House and Congressional redistricting plans.

South Carolina Senate Democratic Caucus, 2011. Assist counsel in preparation and evaluation of Senate and Congressional redistricting plans.

Board of Trustees of School District of Fairfield County v. State of South Carolina et al. Op. No. 27035 South Carolina Supreme Court (29 August 2011) 2010. Analysis of votes on veto overrides of local legislation, 1903-1910, relied upon by S.C. Supreme Court in its decision.

Analyses of elections and electoral participation for use in submissions to Voting Rights Section, Department of Justice, regarding preclearance consideration of 2010 S.C. Acts 308 and 309, on behalf of Fairfield County (South Carolina) Board of School Trustees, 2010.

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South Carolina Conference of Branches, NAACP. Retained to assist branches with evaluating and proposing districting plan for local jurisdictions. 2001 – 2005, 2011 – 2013.

South Carolina Legislative Black Caucus. Provide technical assistance with respect to reapportionment especially regarding the South Carolina House of Representatives. 2001.

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***Smith, et al. v. Beasley, et al.* and *Able, et al. v. Wilkins, et al.*,** United States District Court for the District of South Carolina, 1995 - 1996. Racial polarization in voting, differential voter participation, and socio-economic disparities in income, education, employment, housing, communications and transportation in challenged South Carolina House of Representatives and Senate districts. Expert report and testimony.

***NAACP, et al. v. Truitt, et al.*,** United States District Court for the District of South Carolina, 1995 - 1997. Racial polarization in voting in Florence School District 1. Prepare proposed redistricting maps. Expert report and testimony.

***Franklin, et al. v. Campbell, et al.* and *NAACP, et al. v. Town of Hemingway, et al.*,** United States District Court for the District of South Carolina, 1994. Prepare demographic and voting analyses with respect to attempted secession from one county and annexation to another on behalf of Williamsburg County School Board. Expert affidavit.

Richland County (South Carolina) Council, 1994, 1996-1997. Prepare demographic and voting analyses regarding preclearance filing with Justice Department under Voting Rights Act for County Council districts.

***NAACP, et al. v. Spartanburg County Board of Education, et al.*,** United States District Court for the District of South Carolina, 1992 - 1993. Analyze proposed districting proposals and prepare alternative proposals for Spartanburg County Board of Education, Spartanburg School District 5 and Spartanburg School District 7.

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NAACP, et al. v. Rowan-Salisbury Board of Education and Rowan County Board of Elections, United States District Court for the Middle District of North Carolina, 1992. Racial polarization in voting, differential voter registration and turnout, and lingering effects. Expert report.

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